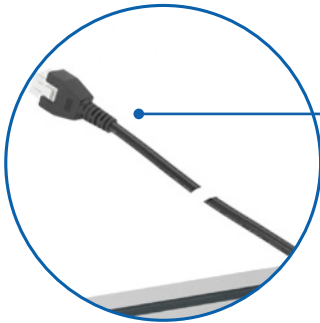


## Electric cylinder LZ 60 P

# Linear cylinder

The industrial design complete system with push/pull forces up to 4000 N

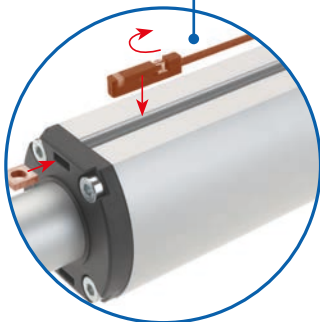


### External control

- Range of connecting options:
  - Up/down mono operation
  - PLC
  - synchronous control
  - integrated control

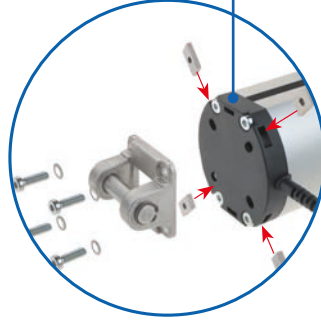
### External control electrically connection „e“

- Connection (2,5 m) to MultiControl II synchronous control



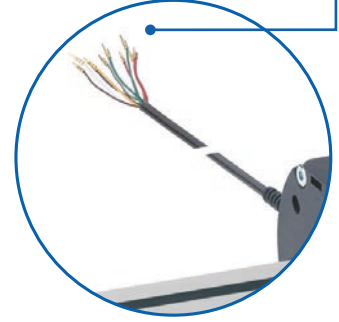
### Adjustable external magnetic switch

- Covered in slot geometry
- Stroke can be adjusted
- Accessories can be retrofitted
- Pre-fitted with internal magnets for external magnetic switch



### Range of fitting dimensions

- Slide-in clasp nuts enable fitting dimensions of 37.5 to 40.5 mm.
- Compatible with a wide range of fixing elements from the pneumatic industry.



### Elec. connection "b"

- All connecting cables (approx. 1 m) is fed out of the unit (limit switches, motor, 2-channel Hall sensor) e.g. for connection to a PLC
- Connection to PLC or equivalent control 24 V/36 V

### Highlights / Features:

- Integrated DC drive
- Flexible use of space due to different motor installation options: parallel (LZ 60 P) or rod shaped (LZ 60 S)
- Coverable slot geometry on both sides supports a range of fixing options
- Push rod with rotation locking
- Maintenance-free for up to 10,000 double strokes
- IP 54
- Self-locking

### Options:

- Special stroke lengths available on request
- Can also be used cable free for mobile adjustment tasks with MultiControl II duo accu

# Table of contents

<b>Versions</b>	<b>Electric cylinder</b>	E-cylinder LZ 60 P .....Page 140
<b>Accessories</b>		Fixing.....Page 142
		Magnetic switch .....Page 145

## Electric cylinder LZ 60 P

# Technical data

### General information/operating conditions

Type	LZ 60 P external control	Custom
Design	Linear cylinder with integrated DC motor	
Guide	Double bearing via POM bushes	
Installation position	Any position/without shear forces/hanging only with drop protection provided by the customer	
Push force	Up to 4000 N	
Pull force	Up to 4000 N	
Self-locking	Yes	
Max. travel speed	Up to 50 mm/s	
Max. Hub	600 mm	1200 mm
Installation dimension	Stroke + 168,5 mm or Stroke + 184 mm	1383 mm
Voltage	24 to 36 V DC	
Current output	3 A or 4 A	
Protection class	IP 54	
Ambient temperature	+5°C to +40°C	
Displacement during synchronous operation	0 to 2 mm	
Duty cycle (Operation mode S3)	At nominal load, 15% (1,5 min operating time, 8,5 mins rest time)	
Repeatability	0,5 mm	
Stroke tolerances	+0,5 mm / -2,5 mm	

**Note:** RK Rose+Krieger GmbH cylinders are only designed for centric loads.

Drive	Push force [N]	Travel speed [mm/s]	Number of assigned motor channels			
			1	2	3	4
LZ 60 P	2000	11	✓	✓	each 1300 N	each 1000 N
LZ 60 P	3000	5,5	✓	✓	each 2100 N	each 1500 N
LZ 60 P	4000	3	✓	✓	each 3100 N	each 2500 N
			MultiControl II duo		MultiControl II quadro	

**Note:**

If more than 2 drives are to be operated synchronously at nominal load, BUS communication between two or more MultiControl II duo controllers is required.

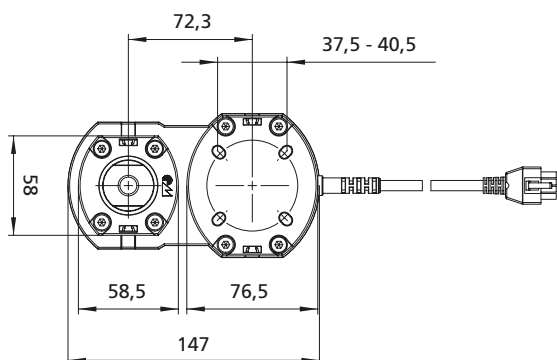
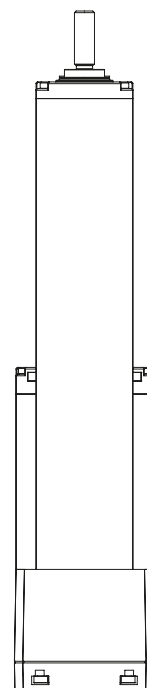
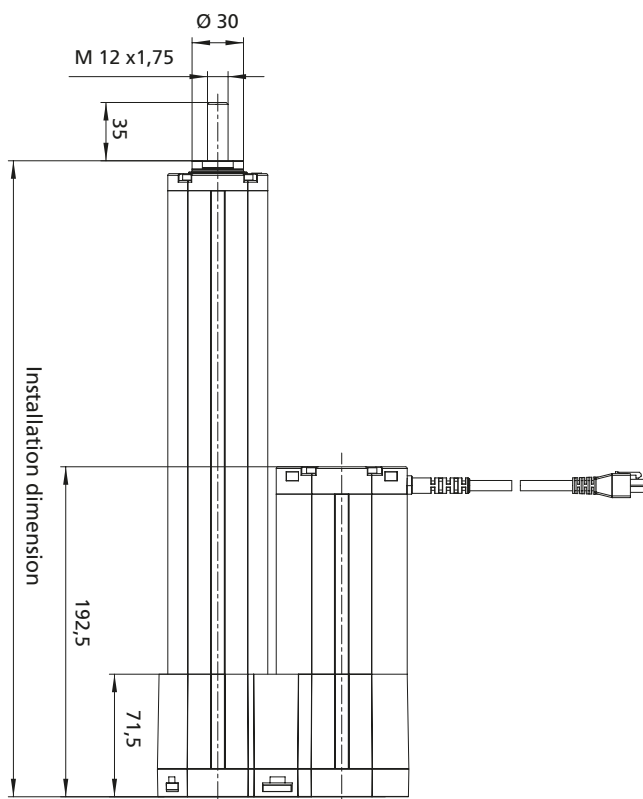
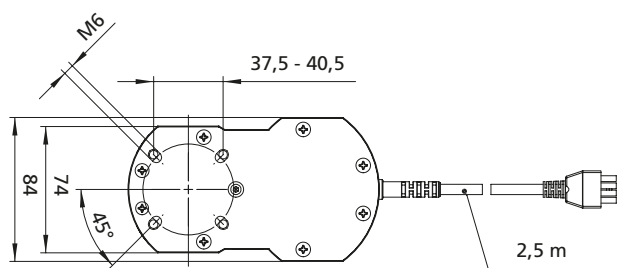
The necessary accessories can be found on page 172.

The procedure for setting up BUS communication is described in detail in the operating manual.





### LZ 60 P – Version



## Electric cylinder LZ 60 P

# Technical data

### LZ 60 S linear cylinder – highly versatile use

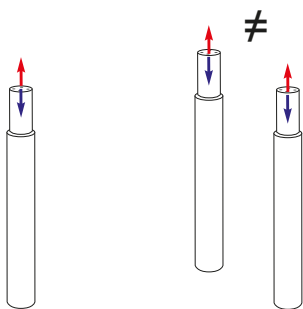
The LZ 60 series does not just impress with high functionality and high power density, but also with its attractive design. The side slots and the versatile accessories facilitate simple connection in accordance with the customer's requirements. The maximum stroke is 600 mm with a maximum lifting force of up to 4000 N per drive.



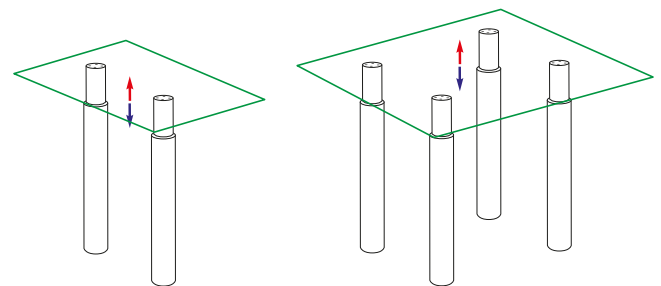
- Special features:
- High functionality
- High power density
- Attractive design

#### Ideal areas of application:

- Precise industrial applications with compact design which require a high power density



1-2 LZ 60 in single or parallel operation



2-4 LZ 60 in synchronous operation

### Parallel operation

The premium version of the MultiControl II quadro has drive group management. Alongside synchronous and stand-alone operation, this also allows the following drive combinations to run parallel (1+1, 1+2, 2+1, 2+2).

### Synchronous operation

Synchronous operation of two or more drives. In conjunction with the integrated sensors, the control (see page 122) ensures synchronisation, and thus constant alignment of all the drives in both directions of travel, even if subject to different loads. The synchronous operation tolerance depends on the lifting speed and is max. 1.5 mm for the 8 mm/s version and max. 3 mm for the 25/32 mm version.

A memory function is also available.

**Version for external control with open motor cable / incremental position sensor / limit switch**

Code No.	Type	Max. force F [N]	max. travel speed [mm/s] 24 V DC	max. travel speed [mm/s] 36 V DC
QKX00AC0B0_ _ _	LZ 60 P	1000	40	50
QKX00AB0B0_ _ _	LZ 60 P	2000	22	28
QKX00AE0B0_ _ _	LZ 60 P	3000	12	15
QKX00AF0B0	LZ 60 P	4000	6	9

e.g. stroke [mm] = **2 0 2**

Stroke* [mm]	Installation dimension [mm]	Weight [kg]
105	273.5	3.7
150	318.5	3.8
202	371.0	4.0
255	423.5	4.2
300	468.5	4.4
352	536.0	4.5
405	588.5	4.7
450	633.5	4.9
502	686.0	5.1
555	738.5	5.2
600	783.5	5.4

**Version for external MultiControl II synchronous control**

Code No.	Type	Max. force F [N]	max. travel speed [mm/s] 28 V DC
QKX00AC0E0_ _ _	LZ 60 P	1000	22,5
QKX00AB0E0_ _ _	LZ 60 P	2000	11
QKX00AE0E0_ _ _	LZ 60 P	3000	5,5
QKX00AF0E0	LZ 60 P	4000	3

e.g. stroke [mm] = **6 0 0**

\*Tolerance: +0.5mm / -2.5mm

**System components**

Code No.	Accessories
<b>Controls</b>	
QST30H12AA000	MultiControl II duo - Basic
QST30H12AA022	MultiControl II duo - Premium
QST30H14AA000	MultiControl II quadro - Basic
QST30H14AA022	MultiControl II quadro - Premium
<b>Hand switches</b>	
QZB11G07AV041	Hand switch with 6 function keys and display – 1 m cable lenth
QZB11G07AB041	Hand switch with 2 function keys – 1 m cable lenth
QZD000074	Hand switch drawer for hand switch with 6 and 2 function keys
<b>IEC connector</b>	
QZD070618	IEC cable (Europe version, earthed plug)

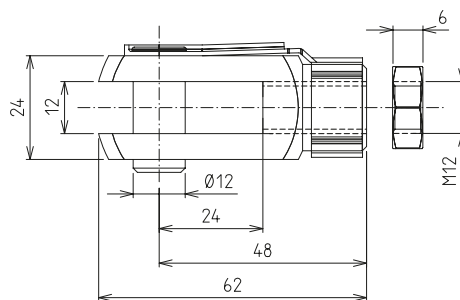
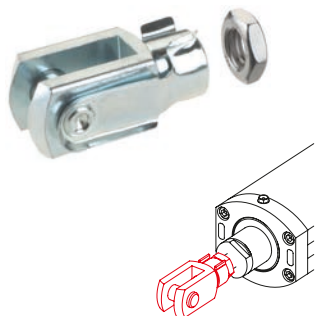
**Note:**

Further accessories (hand switches, connecting cables etc.) can be found in the chapter „Controls and accessories“ starting on page 152

## Electric cylinder LZ 60 P

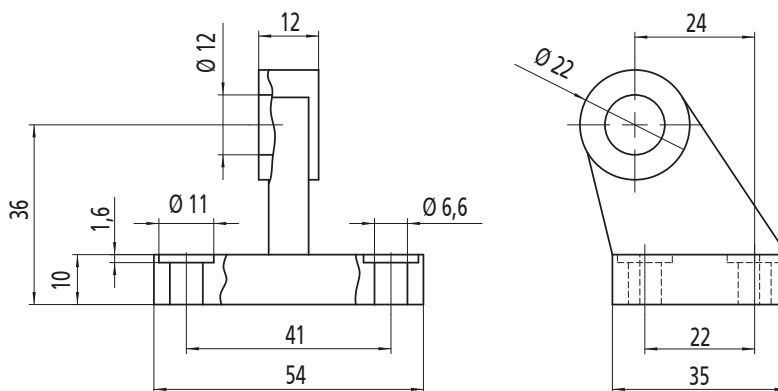
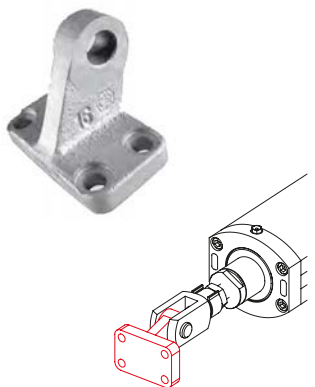
# Accessories

### Clevis



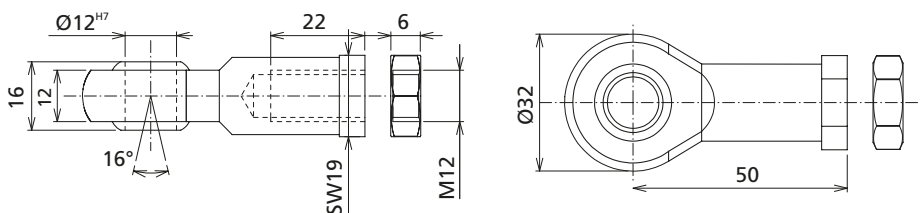
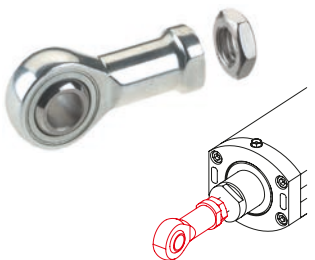
Code No.	Type
QZD050570	Clevis M12

### Bearing block for clevis



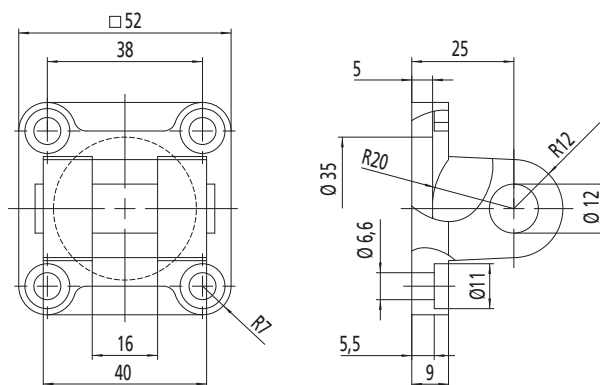
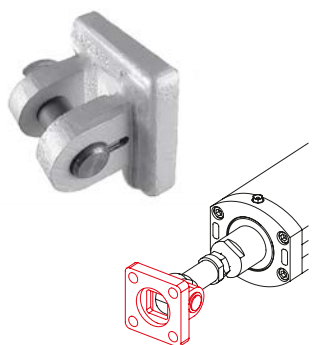
Code No.	Type
QZD050572	LZ 60 Bearing block Ø 12

### Swivel head



Code No.	Type
QZD050574	Swivel head M12

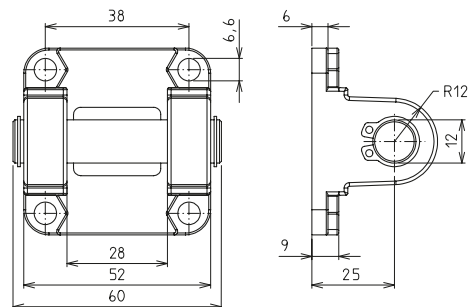
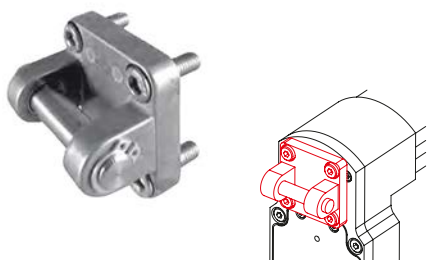
### Clevis mounting for swivel head



Code No.	Type
QZD050576	LZ 60 Clevis mounting Ø 12

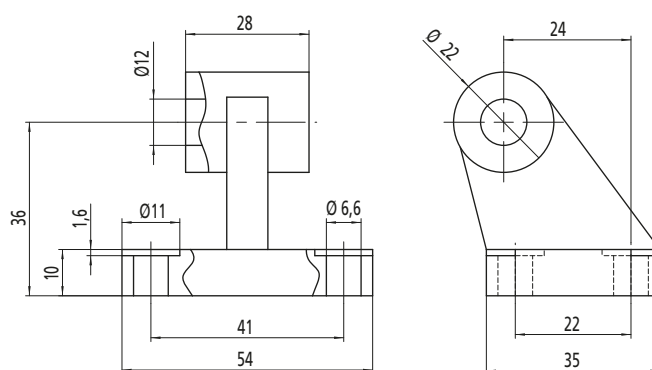
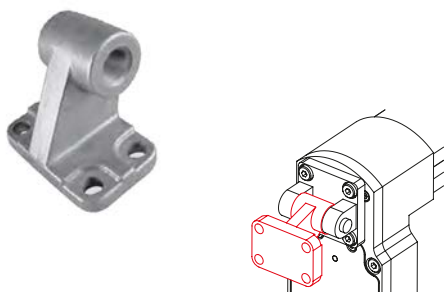


### Swivel flange



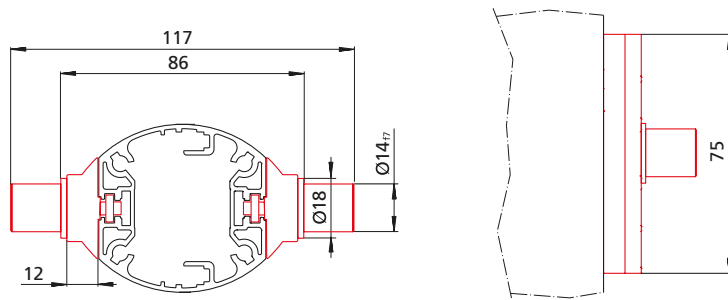
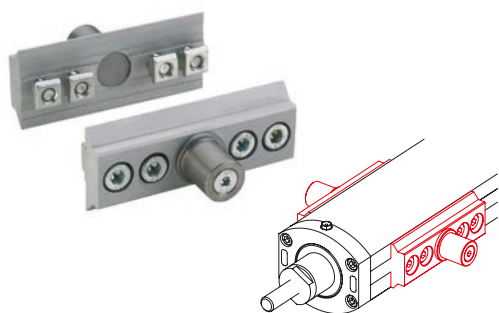
Code No.	Type
QZD050578	Swivel flange Ø 12

### Bearing block for swivel flange



Code No.	Type
QZD050583	LZ 60 Bearing block Ø 12

### Trunnion support blocks

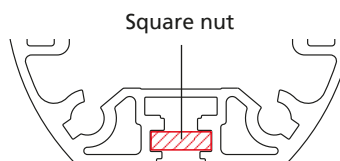


Code No.	Type
QZD050586	Trunnion support blocks LZ 60

#### Order instruction square nut:

- Purchase only in lot sizes and a multiple of that, see product table below

### Square nut



- The square nut enables the attachment of fittings to the cylinder. Nuts can be slid into the lateral slots for this purpose.

Code No.	lot sizes	Type
QZD0505971	10, 20, 30... pcs	Square nut M6, DIN562

## Electric cylinder LZ 60 P

# Accessories

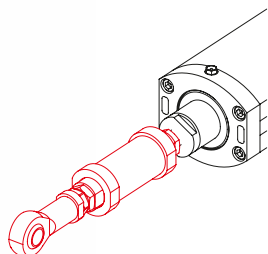
### Axial adjustment

### Axial adjustment

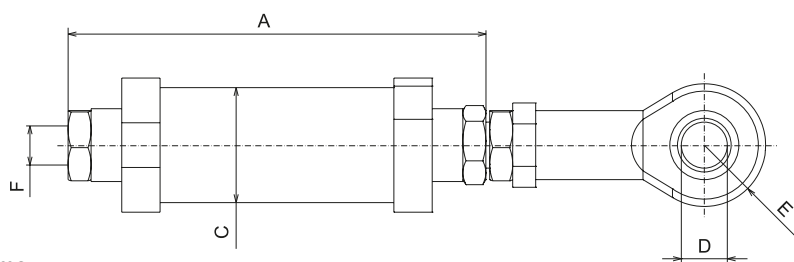
- Compensates manufacturing tolerances
- Compensates installation tolerances
- Length compensation -2 mm
- Reduces commissioning times

### Scope of delivery:

Axial adjustment, incl. swivel head as depicted

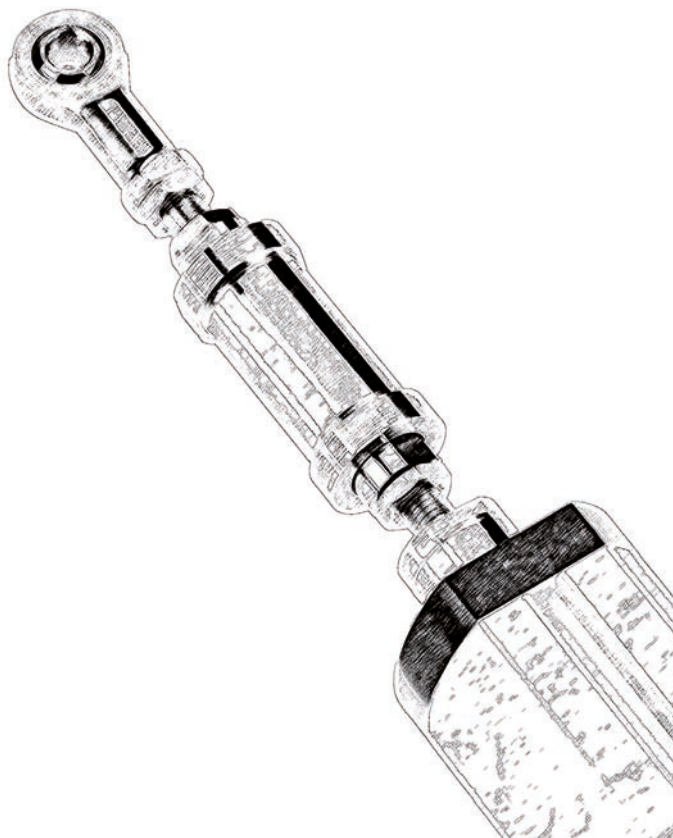


**Note:**  
Screw depth 15 mm max.



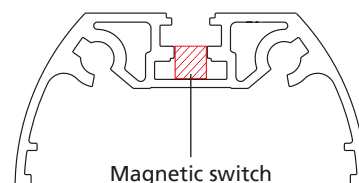
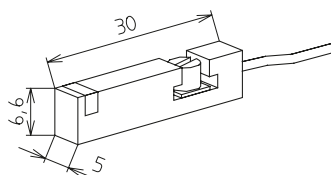
[mm]

Code No.	Load	A	C	D	E	F
QZD050590	600 N	102	Ø30	Ø12	R16	M12
QZD050591	1000 N	102				
QZD050592	2000 N	103.5				
QZD050593	2500 N	109				
QZD050594	3000 N	107.5				
QZD050595	4000 N	139.5				



## Magnetic switch

- Signals from the magnetic switch can be collected and evaluated by a customer-provided control unit (such as a PLC).
- The switch can be retrofitted in the lateral slot (protected by a cover profile as standard)
- Magnets are already integrated in the cylinder as standard.



Code No.	Type
QZD050598	Magnetic switch, NO contact, cable length 6 m
QZD050599	Magnetic switch, NC contact, cable length 5.3 m

## Magnetic switch – Technical data

	NC contact	NO contact
Voltage	10-30 V DC	5-30 V DC
Current output	< 10 mA	< 10 mA
Output current	Max. 100 mA	Max. 50 mA
Output type	PNP	PNP
Function indication	LED	LED
Ambient temperature	-25°C to +85°C	-20°C to +70°C
Protection class	IP 67	IP 68